NOAA Climate Programs Office
Climate Prediction Program for the Americas
Annual Progress Report

Grant Title   : Incorporating knowledge of observational uncertainties in streamflow
                        forecasting applications in the Western U.S.

Report Type   : Annual Progress Report

Name of PI   : Andrew G. Slater

Report Period : Year ending 02/29/2008

PI's Institution: CIRES/NSIDC, University of Colorado, Boulder, CO, 80309-0449

Grant number : NA06OAR4310065 / GC06-216

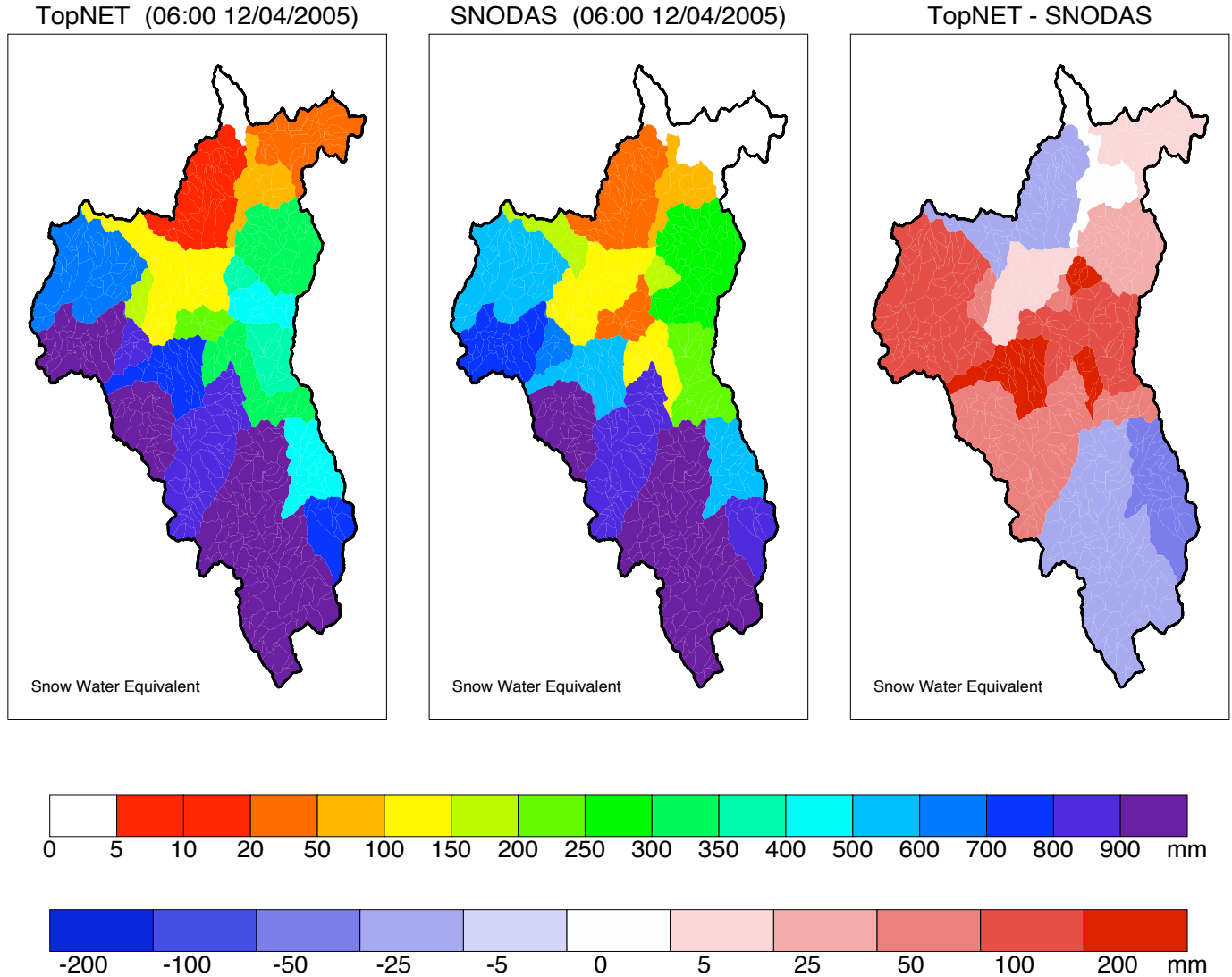| TopNET (06:00 12/04/2005) | SNODAS (06:00 12/04/2005) | TopNET - SNODAS |

Snow Water Equivalent

Figure 1: Simulations from the TopNet distributed hydrologic model for the East Fork of the Carson River basin. Total basin snow water equivalent is modeled quite well, but there may be regions of compensating error. Note that the SNODAS product should not be considered "truth", but streamflow results from this basin suggest that it is quite a reasonable estimate.
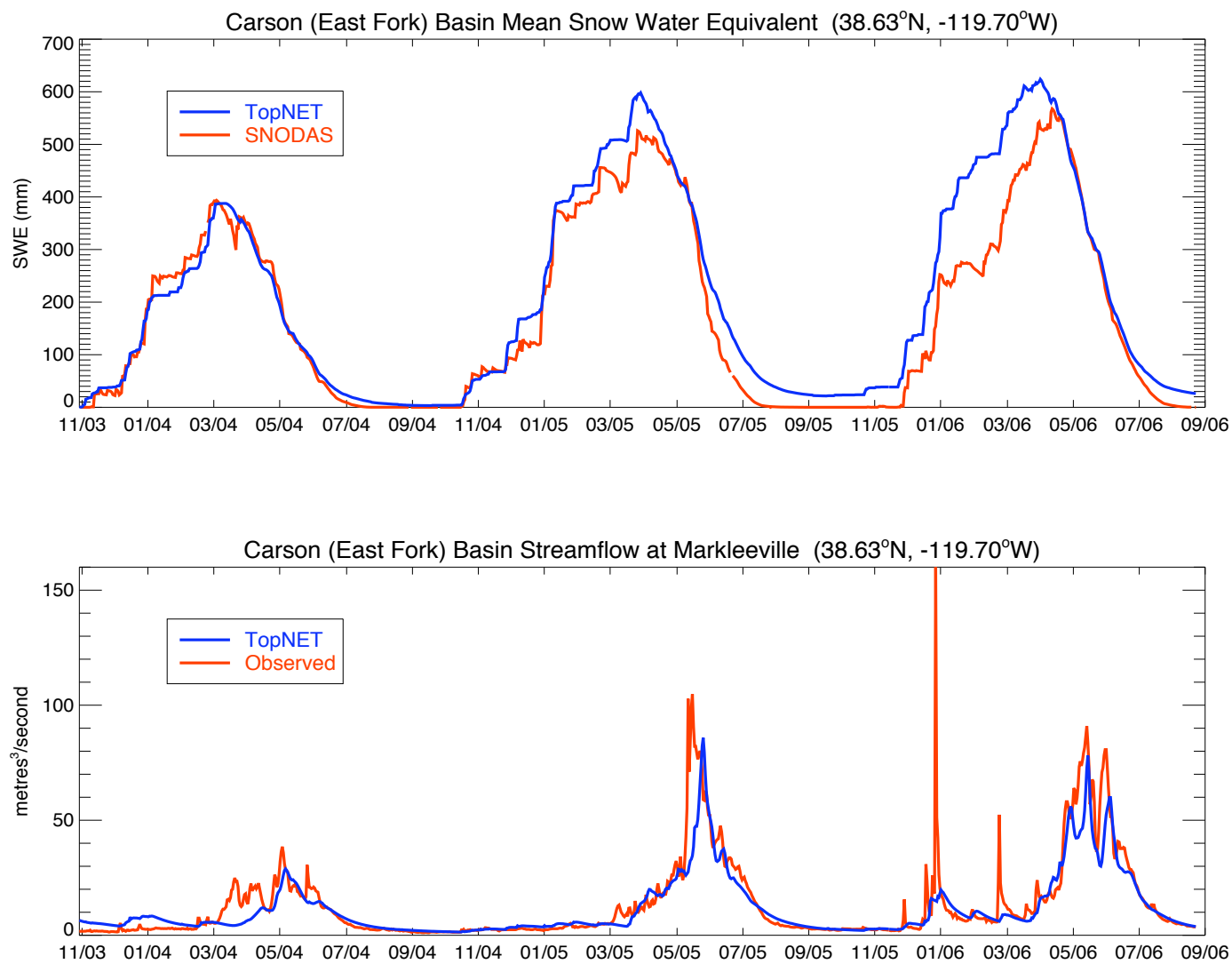
Figure 2: Results form the TopNet model (Clark et al., 2008) when the snow simulation is calibrated against snow water equivalent from SNODAS. The model predicts more snow than SNODAS, but produces less runoff than observations, suggesting that the SNODAS product has slightly underestimated snow volume in this basin.